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REVIEW INTEGRATIVE OF THE LITERATURE

Delirium em idosos em unidades de terapia intensiva: revisão integrativa da literatura

Delirium in the elderly in intensive care units: an integrative literature review

Delirium en ancianos en unidades de cuidados intensivos: revisión integradora de la literatura

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ABSTRACT

Objective: conducting a survey about delirium in the elderly in an Intensive Care Unit (ICU). **Method:** an integrative review of the literature held in databases MEDLINE and IBECS, in May 2012, whose inclusion criteria were: to be published between May 2007 to May 2012, available in full and in Portuguese, English and Spanish. **Results:** there were found 68 productions and selected 16, which were categorized into: 1) Incidence and prevalence of delirium in the elderly in ICU; 2) Factors predisposing and precipitating risk of delirium in the elderly in ICU and 3) Strategies for preventing modifiable risk factors of delirium in the elderly patients in the ICU. **Conclusion**: the scientific production about delirium is incipient in Brazil, health professionals, especially nurses, need to improving the recognition of this syndrome and implementing strategies for risk prevention factors for delirium. **Descriptors:** Elderly, Delirium, Intensive care units.

RESUMO

Objetivo: realizar um levantamento acerca do delirium em idosos em Unidade de Terapia Intensiva (UTI). **Método:** revisão integrativa da literatura, nas bases de dados MEDLINE e IBECS, em maio de 2012, cujos critérios de inclusão foram publicados entre maio de 2007 a maio de 2012, com disponibilidade na íntegra, e nos idiomas português, inglês e espanhol. **Resultados:** foram encontradas 68 produções e selecionadas 16, as quais foram categorizadas em: 1) Incidência e prevalência de *delirium* em Idosos na UTI; 2) Fatores de risco precipitantes e predisponentes do *delirium* em idosos na UTI e 3) Estratégias de prevenção de fatores de risco modificáveis do *delirium* em idosos nas UTIs. **Conclusão**: a produção científica acerca do delirium no Brasil é incipiente, os profissionais de saúde, especialmente os da enfermagem, necessitam melhorar o reconhecimento desta síndrome e implementar estratégias de prevenção dos fatores de risco para delirium. **Descritores:** Idoso, Delirium, Unidades de terapia intensiva.

RESUMEN

Objetivo: realizar un estudio acerca del delirium en los ancianos en la Unidad de Cuidados Intensivos (UCI). **Método:** revisión integradora en bases de datos MEDLINE e IBECS, en mayo de 2012, cuyos criterios de inclusión fueron: ser publicados entre mayo 2007 a mayo 2012, disponible en su totalidad en portugués, inglés y español. **Resultados:** se encontraron 68 producciones y seleccionadas 16, que fueron clasificadas en: 1) Incidencia y prevalencia de delirium en ancianos en la UCI; 2) Factores de riesgo precipitantes y predisponentes del delirium en ancianos en la UCI y 3) Estrategias de prevención de factores de riesgo modificables del delirium en ancianos en las UCI. **Conclusión:** la producción científica acerca del delirio es incipiente en Brasil, los profesionales de la salud, especialmente las enfermeras, tienen que mejorar el reconocimiento de este síndrome y poner en práctica estrategias para prevenir los factores de riesgo para el delirium. **Descriptores:** Ancianos, Delirium, Unidades de cuidados intensivos.

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INTRODUCTION

The Intensive Care Units (ICU) are spaces intended for the care of critical patients. In these units, about 60% of patients are individuals over the age of 65.[1] There is therefore increased demand assistance of high complexity in this age group due to the phenomenon of demographic transition, which occur worldwide.[1] In this perspective, delirium, stands out among the critical issues of health that commonly present in the elderly hospitalized in this environment of care.

Delirium is a syndrome of acute nature, which is characterized by fluctuating changes in level of consciousness, attention and perception[2,3], presents itself as a frequent complication in critical patients, especially in the elderly, because these are more predisposed to develop it, as a result of exposure to iatrogenic events promoted by the multidisciplinary team that are mostly caused by a deficiency in the recognition of characteristic signs and symptoms of this syndrome.[4-5]

Although the field of knowledge about the physiopathogenic process of delirium still requires many different neurochemical processes avanços6 are involved in its genesis, many of those induced by physical causes.[7] Among the clinical forms, are identified the hyperactive, characterized by States of agitation; the underactive, in which the patient is lethargic, and mixed, with features that permeate the two previous forms.[8] It should be noted that the elderly are more affected by hypoactive[9] making consequently more difficult the identification of this syndrome in these patients, and therefore, a deficiency in identifying signs and symptoms suggestive.[9-10]

It should be noted that data about the delirium in the elderly in national surveys are scarce. Associated with this fact, the disorientation and confusion – signs suggestive of delirium in these patients may go unnoticed, since many practitioners mistakenly attributed these findings to characteristics of senescence.

Associated with this, another problem that contributes to low detection of delirium in ICU is the absence of institution of screening routines.[11] The use of rating scales and identification of this syndrome, still not adopted in many of these spaces, even with access to instruments which have been validated in several countries, to assist in your diagnosis and that can be applied by several professionals who make up the multidisciplinary team among them, the nurse.[2]

In this way, it is possible to observe that in the critical care units, there are still shortcomings in the diagnosis of delirium, and international studies show that there is an increase in the rates of morbidity and mortality and hospital stay when the delirium sets in.[6,12-13]

Thus, the relevance of this study is to address a theme yet little investigated and analyzed in the national context, for being a clinical syndrome that may be linked to several

risk factors, it is important that the nurse and the multidisciplinary team recognize these factors, as well as, know to identify the syndrome and use evidence-based conduct that guide decision-making to its prevention, its diagnosis and its treatment.

Thus, from this study will be possible to know what is being searched in relation to the delirium in the elderly phenomenon, as well as, these syndrome prevention strategies within the ICU. The summarization of these findings is relevant to the adoption of evidence-based pipes, thus contributing to improvement of quality of nursing care and multidisciplinary team directed the elderly with delirium in ICU. Considering this, it is expected to contribute to the lifting of the magnitude of this problem. Against the above, the objective of this study was to: conduct a survey of the scientific literature about the delirium in elderly people in Intensive Care Unit (ICU).

METHOD

It is an integrative review of the literature, because it allows the synthesis of published studies and makes findings of a particular area of study in addition to point knowledge gaps requiring further studies.[14] The steps covered were: (1) Drafting of guiding the research question; (2) establishment of criteria for inclusion and exclusion of studies/sampling and Search in the literature; (3) defining the information to be extracted from selected studies/categorization of studies; (4) evaluation of the studies included in the integrative review; (5) interpretation of results; (6) Presentation of the review/knowledge synthesis .[14]

The bibliographic survey was conducted in the Virtual Health Library (VHL) in May 2012, in databases Medical Literature Analysis and Retrieval System Online (MEDLINE) and Spanish bibliographic index of Health Sciences (IBECS) having as a guiding question: What the knowledge produced in the scientific literature about the delirium in the elderly hospitalized in ICU?

The following descriptors were used: delirium, intensive care units and elderly. It was used as a search strategy "delirium and intensive care units" and selected the limit for seniors.

As criteria for inclusion were bounded publications made from May 2007 to may 2012, which were available in full through electronic holdings, published articles in full text, in Portuguese, English or Spanish languages. Duplicate articles were excluded in the databases, or that did not meet the object of study. For data collection used an instrument that contemplated information related to article ID, author (s), year of published periodic publication, methodological features of article and country of publication.

Were identified in total 68 productions and from the inclusion criteria were selected 16 studies, which were printed, translated, read in its entirety, being prepared and presented in tables. The main aspects addressed about delirium in elderly people in

INTENSIVE CARE were categorized under: incidence and prevalence of delirium in the elderly in the ICU; predisposing and precipitating risk factors for the development of delirium in the elderly in ICU; prevention strategies of modifiable risk factors for delirium in elderly in ICU. It was subsequently held on thematic analysis and discussion on the basis of the related literature.

RESULTS AND DISCUSSION

It was found that from the 16 selected studies, 15 (94%) were obtained through MEDLINE, and 1 (6%) through IBECS. It was noticed a greater number of publications in the years 2009 and 2010, with representation of 5 articles (31,2%) in each year. In relation to journals, we highlight the Critical Care with 5 articles published (31,2%). Figure 1 presents the summary of selected studies.

Figure 1 - Distribution of studies according to author, periodical, type of study, year and country of publication. João Pessoa-PB, 2013.

Author	Journal	Type of the study	Year	Country
Van den Boogaard M	British Medical Journal	Observational Multicenter	2012	Netherlands
Svenningsen H, Tonnesen E	Nursing in Critical Care	Prospective	2011	Denmark
Black P, Boore JRP, Parahoo K	Journal of Advanced Nursing	Comparative	2011	Northern Ireland
Mistarz R, Eliott S, Whitfield A, Ernest D	Australian Critical Care	Observational	2011	Australia
Campbell NL et al	Trials	Randomized controlled	2011	USA
Pandharipande PP et al	Critical Care	Randomized controlled double-blind	2010	England
Salluh J et al	Critical Care	Observational multicenter	2010	Brazil
Pisani M, Murphy TE, Araújo KLB, Van Ness PH	Journal of Critical Care	Cohort prospective	2010	USA
Pitrowsky MT, Shinotsuka CR, Soares M, Lima	Journal of Intensive Care	Review	2010	Brazil

MASD, Salluh JIF				
Tobar E et al	Intensive Medicine	Validation study	2010	Chile
Weinhouse GL et al	Critical Care	Integrative Review	2009	USA
Pisani M, Kong SY, Kasl SL, Murphy TE, Araújo KL, Van Ness PH.	American Journal of Respiratory and Critical care	Prospective cohort study	2009	USA
Pisani M, Murphy TE, Araújo KLB, Van Ness PH	Critical Care Medicine	Prospective cohort study	2009	USA
Page VJ, Navarange S, Gama S, McAuley DF	Critical Care	Prospective	2009	England
Van Rompaey B, Elseviers MM, Schuurmans MJ, Shortridge-Baggett LM, Truijen S, Bossaert L	Critical Care	Multicenter cohort study	2009	Belgium
Pisani M, Murphy TE, Van Ness PH, Araujo KL, Inouye SK	Arch Intern Med	Prospective cohort study	2007	USA

On the basis of the studies highlighted in Figure 1 the categories were defined:

Incidence and prevalence of delirium in the elderly in ICU

With regard to incidence, identified in four studies, that the occurrence of delirium in the elderly admitted in ICU, varies from 27% to 79%.[6,15,16,17] Other two studies, although reflect the global prevalence of delirium, showed high levels in individuals over the age of 65 years.[12-15] Study that included all adults over the age of 18 years, identified that, of 139 patients who remained under intensive care, 41 (40,2%) presented delirium, being half composed of patients aged over 65 years .[12]

Predisposing and precipitating risk factors for the development of delirium in the elderly in ICU

The occurrence of delirium in the elderly in the ICU is directly linked to risk factors that this population presents, predisposing the, which cannot be modified, therefore, involve personal characteristics and Comorbidities, precipitating as, which are liable to

modification. Are described several factors related to the patient, such as serious illness and the environment. In this review there were identified 13 studies that describe the factors modifiable and non-modifiable arguments to the emergence of the syndrome.

The modifiable risk factors are those resulting from a pre-existing condition of the patient without possibility of intervention at the time of clinical presentation of delirium, among these include abstinence to smoking and alcohol consumption; advanced age and prior cognitive impairment.[4,5,6,7,8,9,12,15,16,17,18] Having modifiable risk factors relate to an acute condition or iatrogenic and environmental events which are amenable to intervention, are examples, infections[9,12,18], sedatives and opioids administered[5,12,13,15,16,18,19],emergency admission[18], pain[9,12-15], hypoxia[12], physical restraint[12,7], sleep disturbances[5,9,12,19], invasive devices[9,13] and environmental characteristics of the ICU as artificial lighting, noise, family isolation.[7,9] The delirium association with the aggravation of chronic Comorbidities that culminate with hepatic dysfunction, cardiovascular and renal has been described in five studies.[4,6,17,18,19]

Prevention strategies of modifiable risk factors for delirium in elderly in ICU

Delirium prevention must be based on recognition of the modifiable risk factors, which are amenable to intervention. In this review there were identified 10 studies that describe the modifiable risk factors through the pharmacological and non-pharmacological action on prevention of syndrome in older adults admitted to ICU.[2,5,8,9,13,17,18,19,20,21]

Among the pharmacological strategies highlight the use of haloperidol, being recommended for the elderly at half the dose used in adults.[21] The sedative of choice was dexmetomidin.[19] Among non-pharmacological strategies stand out: the psychological care in the ICU, the presence of the patient's family, demobilization of physical restraint, promoting calm, quiet and bright and sound stimuli reduction especially overnight seeking adequate sleep and rest, early mobilization, music therapy, cognitive stimulation, use of early screening scales as the CAM-ICU, adapting the environment to aid in the perception of night and day, use of glasses and hearing aids, early removal of invasive devices and electrolytic disorders correction.[7,5, 9,13, 18,20,21]

The studies analyzed show that research about delirium in the elderly population are still incipient, and that this syndrome is a frequent problem in these patients. The incidence of delirium in the population of 60 years or more in several international studies ranged from 27 to 79%, proving to be a major problem in these patients.

Several randomized studies have investigated the occurrence of delirium in the elderly and identified the phenomenon emerges quickly when this group needs care in critical environments.[17,16,6,15] In 2007, a study showed that 70,4%) (214 elderly admitted to ICU presented the painting in the first 48 hours.[17] In 2009, another observational study, found that 239 (79%) of seniors studied had delirium during the permanence in ICU, 72% of which showed the syndrome on the first day of hospitalization .[6]

These above-mentioned authors investigated the occurrence of persistent delirium in the elderly who had delirium in ICU in two studies. In the first study, which involved 239 16 seniors, and in the second we had a sample of 173 seniors[15], it was found that 27% and 58% respectively, performed with delirium after his persistent discharge from ICU. In addition, it

was noted that the occurrence of delirium in severely ill elderly have a great impact on mortality, because 50% of patients affected by the phenomenon died within one year .[6]

Given the relevance of delirium, so much in the survival and long-term cognitive change, it is necessary to the recognition of the factors associated with the onset of the syndrome and what can be modified in elderly care, when admitted in critical units.[6] Are recognized factors that cannot suffer speeches, but that predisposes the elderly the States of confusion, especially when exposed own interventions acute diseases treatment.

Recognizing that the elderly, especially in larger age groups[4,5,6,12,16,18] are more likely to develop delirium, especially if they have some previous cognitive deficit[17], following the example of dementias frames, nursing staff and other intensivist professionals, needing to investigate the factors responsible in precipitate the occurrence of the phenomenon, for modifiable factors performance. In one study, dementia was associated with the persistent delirium.[15] In another survey was identified that the elderly that feature this dysfunction, when exposed to the environment of UTI, feature significant worsening of cognitive function.[22]

Among the factors that precipitate the emergence of the phenomenon, we can highlight some points relevant to performance of nursing staff and serving the elderly ailing multiprofessional, modifiable character, therefore, preventive[7], and the identification of these factors must occur on the occasion of the admission of the elderly in the ICU, gleaming direct intervention and prevention strategies early.[17]

With regard to pharmacological prevention strategies include the use of haloperidol, a reduction of benzodiazepine, and sedative drug therapy alternatives. A study that uses a pharmacological management program in accompanying delirium recommends the use of haloperidol in the elderly, but with half the dose used in adults.[21] On the other hand, another study[15] alert to the presence of persistent delirium after the use of haloperidol, because of the risk of this medication convert a hyperactive State of the syndrome to a hypoactive State. Therefore, there are disagreements in the literature regarding the use of haloperidol when the frame of psychomotor agitation and confusion sets in.

It should be emphasized that the use of psychoactive drugs, the benzodiazepines, may interfere with the brain neurotransmission and induce the symptoms of delirium[7], and must be, therefore, the sedation of the elderly, criterious. Studies show the relationship of delirium with the use of benzodiazepines and opioids which are common protocols of sedation used in many ICU[4,13,16,19] seniors receiving benzodiazepines and/or opioids in the ICU had association with prolonged duration of delirium, [16] Although another study [9] highlight the importance of continuity of benzodiazepines in the elderly that are already chronic use at risk of developing withdrawal symptoms with abrupt withdrawal.

As an alternative to elect a drug of choice for the sedation of patients with critical risk of delirium, was elected the dexmetomidin yes, study[19] that compared using this medication in septic patients sedation with a benzodiazepine has verified that its use contributed to decrease in incidence, prevalence, and mortality of delirium.[19] Non-pharmacological strategies in terms of prevention of delirium, a comparative study, which involved their family in psychological care for patients in the ICU, with intervention group and control group composed of 73% of seniors, among a total of 170 patients critically ill

patients, it was found that 54 (77%) of patients in the control group presented delirium, while 23 (29%) of the patients in the intervention group showed the phenomenon, indicating the importance of the presence of a family member as a strategy of prevention of risk factors in critical care environments.[20]

Another risk factor that deserves highlight is the physical restraint, one of the main precipitating factors of delirium in the elderly, which is in constant practice in many ICU, whose goal is to avoid withdrawals of venous catheters, tubes and self-infringed lesions. Often, this device, called a "light off", is used even in the elderly without agitation prior frame. Thus, there is a great need for changes of this practice, therefore, the literature States that the physical restraint significantly increases the incidence of delirium and, in some countries such as Denmark, this device can only be used with the permission of a head doctor.[12] A study showed that the use of physical restraint presented very high risk of occurrence of delirium.[7]

Another risk factor is sleep deprivation, since the elderly against this phenomenon reveal similar symptoms of cognitive dysfunction as the inattention and the fluctuation of the mental state.[5] Considering it, the authors suggest that special attention should be given to the environment of the ICU, allowing the period of night, remain calm, with low lights, to avoid interruptions of sleep. During the day, patients must be kept awake, and is considered a measure of comfort similar to pain control.[5]

Already patients suffering with family isolation are more likely to develop delirium, being this factor argument in the discussion of a policy of open visitation in the ICU as a tool of policy propelling humanization of the Unified Health System (SUS). In Brazil, it is guaranteed to the elderly, through the status of older persons, the follow-up by family members in his period of hospitalization, however, in some institutions is prohibited the presence of these relatives, by structural problems or due to institutional policies. Family participation during hospitalization of the elderly in ICU can provide reduction of stressors that exist in this environment, representing a primary prevention in relation to mental state changes.[20]

Accordingly, it is suggested that measures of humanization, the example of the integration of family members during hospitalization through the open visitation, associated with pharmacological and non-pharmacological practices need to be encouraged and implemented by multidisciplinary team composed, among others, by professional doctors, nurses, pharmacists, physiotherapists, occupational therapists, nutritionists and psychologists. Other authors highlight that should be carried out still other small interventions, with the focus on modifiable risk factors, and must be provided an environment in the critical care units less inhospitable, with improvement in the perception of night and day, use of glasses and hearing aids, early removal of invasive devices and electrolytic disorders correction.[9-13]

Another prevention strategy required is a model of forecasting and tracking of occurrence of delirium. Early identification facilitates the use of preventive measures, especially the pharmacological not that can be used by all professionals, following the example of early mobilization, music therapy, cognitive stimulation.[18] It is important to highlight the key role of nursing staff in the detection of delirium, as these professionals

remain constantly bedside, thus becoming easier early detection especially with the use of a screening tool, the example of the Confusion Assessment Method in Intensive Care Unit (CAM-ICU).[2]

CONCLUSION

In this review, it was possible to identify that most publications, almost absolute, was conducted by international researchers, demonstrating that Brazil requires advances in the recognition of this syndrome in child care practice, reflecting the results of research.

In international literature, there is a high incidence of delirium in the elderly, often associated with precipitating factors of its occurrence, which are liable to changes, through prevention and surveillance strategies. In these studies, it is evidenced the importance of changes in social assistance practices, especially driven by nursing staff, within a multidisciplinary context, aiming at decreasing the lasting effect of this phenomenon in the elderly when remain severely ill.

Early identification of older people likely to develop delirium, and syndrome identification itself, using tools that help your diagnosis is of paramount importance to conduct prophylactic measures and treatment. It is known that the elderly critically sick are exposed to a series of interventions required for monitoring bodily functions, but these should be made with established criteria, aiming at the non-occurrence of iatrogenic in this population so sensitive, settling for monitoring actions for their early disruption once the clinical conditions of the old permit.

It is hoped that this study will contribute to the recognition of the incidence and prevalence of this syndrome, in addition to the knowledge of the risk factors and prevention strategies of modifiable risk factors for delirium in elderly people in ICU, improving the quality of multidisciplinary assistance to elderly critically ill.

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